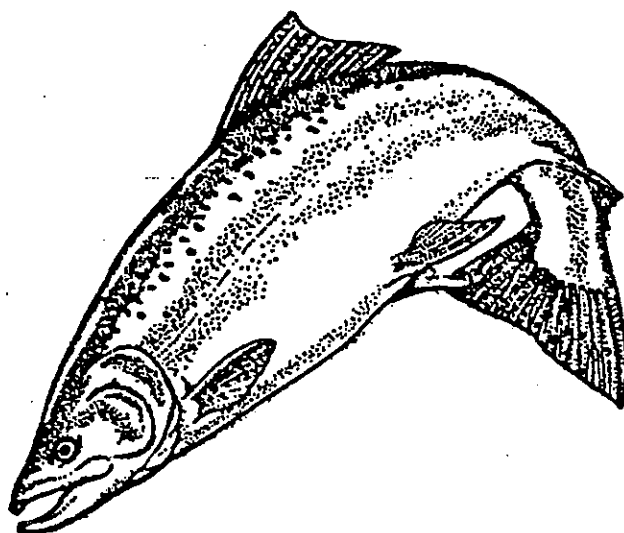


# WALLOWA FISH HATCHERY



## Operation and Maintenance Annual Report



October 1, 1989 to September 30, 1990



## WALLOWA ACTIVITY

OCTOBER 1, 1989 - SEPTEMBER 30, 1990

### INTRODUCTION NARRATIVE

#### Operations:

Wallowa Hatchery is operated as a part of the Lower Snake River Compensation Program (LSRCP). Mitigation goals for Wallowa Hatchery are 2,775,000 eyed steelhead eggs and acclimation of 1,025,000 steelhead smolts. Two satellite stations, Big Canyon (Wallowa System) and Little Sheep (Imnaha System), are used for adult trapping, spawning, and smolt acclimation.

Hatchery production goals were met for Wallowa and Imnaha stocks with 1,993,000 Lot (5690) and 536,000 Lot (2990) eyed steelhead eggs respectively, collected, incubated, and shipped to Irrigon Hatchery and 428,000 Lot (5690) Wallowa stock eyed steelhead eggs shipped to Lyons Ferry Hatchery.

A total of 769,000 steelhead smolts were released from Wallowa and Big Canyon acclimation ponds, and 250,000 steelhead smolts were released from Little Sheep Satellite.

Spring chinook (Lookingglass/Carson stock) also returned to Big Canyon. Some 675,000 eyed eggs were shipped to Oxbow Hatchery, Oregon.

Legal rainbow for Northeast Oregon and coho for Phillips Reservoir were produced at Wallowa Hatchery. This activity was funded by State wildlife funds. Some 73,000 rainbow (28,000 lbs.) and 115,000 coho (1,030 lbs.) were produced at Wallowa Hatchery.

Adult steelhead returns to Wallowa Hatchery were down approximately 22% from 1989 returns. Returns to Big Canyon were about the same as 1989 and Little Sheep had an increase of 63% over 1989 returns. Many of the females enter the trap ripe while the males are held for a time to ripen.

#### Maintenance:

Several major projects were completed this year. The pipeline to the two circular ponds was replaced with PVC pipe.

The old wooden cover on the lower spring box was replaced with pre-stressed concrete slabs for safety and water quality concerns.

One of the pipelines under the floor of the old hatchery building was dug up and unplugged so Wallowa River water can now be used in Ponds 6, 7, and 8. The hatchery fish pump and grader were reconditioned.

The domestic well pump at Big Canyon was replaced. The well water aeration tower was insulated to stop condensation. The rotten wood around the aeration tower was replaced. A new foot bridge was constructed across Spring Creek.

#### Personnel:

Lee Scott, a Umatilla Tribal member, began a training program at Wallowa Hatchery January 1990. Ken Spidell, Wayne Huff, and Denny McCleary, seasonal Tech 2's, operated satellite facilities at Big Canyon and Little Sheep. Terry Blessing, a Labor 1, worked during the spawning season. Mike Parrish was hired as the permanent Tech 1 in June 1990. He filled the position vacated by Bill Duke who promoted to the Umatilla Trap and Haul Program. The Manager 2 position was vacant during the last month of the report period.

#### Tables:

The following tables depict steelhead rearing, liberations, adult collection, and spawning information. The last page shows information on Chinook moved from Lookingglass Hatchery to Wallowa Hatchery. The Chinook were held for a short period, and then moved to Big Canyon Satellite for release.

STOCK	COHO <sup>1</sup>	Sandy R.
Lot No.	1189	

#### REARING

Eggs transferred in	126,000	From Sandy Hatchery 2/24/90
Shock loss	2,000	
Fry loss	1,000	
No. eyed eggs	126,000	
No. hatched	123,000	
Percent hatch	97.6	
No. fry liberated	115,820	
Percent mortality to stocking	5.8	
Weight of fry liberated	1,030	
Av. No. / lb. liberated	112.5	
Total pounds of food fed	888	
Total gain for		
all fish liberated	920	
Conversion rate for		
all fish liberated	0.89	

# LIBERATION

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No. / lb.</u>
5/30/90	Phillips Res.	65,225	580	112.5
5/31/90	Phillips Res.	50,595	450	112.4
-----				
Total		115,820	1,030	

Total distribution trips	2
Total pounds liberated	1,030

<sup>1</sup> Funding for the production and distribution of these fish is from the State Wildlife fund and General fund.

STOCK	SPRING CHINOOK	Rapid River
	Lot No.	8588

# REARING

No fingerling shipped in 1/29/90	91,454	From Lookingglass
		4,565 lbs. @ 20.0/lb.
No. smolts liberated	91,433	
Percent mortality to stocking	0.02	
Weight of smolts liberated	5,475	
Av. No. / lb. liberated	16.7	
Total pounds of food fed	570	
Total gain for		
all fish liberated	225	
Conversion rate for		
all fish liberated	2.5	

# LIBERATION

Big Canyon Pd.

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No. / lb</u>
3/31/90		91,433	5,475	16.7
-----				
Total		91,433	5,475	

Total distribution trips	1
Total pounds liberated	5,475

SPRING CHINOOK Carson / Lookingglass Cr. Lot No. 8190
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# ADULT RETURNS

## BIG CANYON TRAP

Date of first return	5/21/90	
Date of last return	8/01/90	
No. of females returning	99	
No. of males returning	97	
No. of jacks returning	7	
Date of peak returns	06/07/90	
No. of males, females, jacks released to spawn naturally	31-37-7	
No. of males, females, jacks transported out	60-54-0	To Wallowa
Mortality of all adult returns	14	

## WALLOWA

No. of males, females, jacks transported in	233-204-0	From Lookingglass, Three-Mile and Big Canyon
Mortality of all adult returns	57	

## LOOKINGGLASS HATCHERY

Date of first return	6/07/90	
Date of last return	9/13/90	
No. of females returning	53	
No. of males returning	82	
Date of peak returns	6/07/90	
No. of males and females released to spawn naturally	0	
No. of males, females, jacks transported out	74-49	To Wallowa
Mortality of all adult returns	12	Killed

## THREE-MILE TRAP UMATILLA R.

Date of first return	5-10-90	
Date of last return	5-12-90	
No. of females returning	101	
No. of males returning	99	
Date of peak returns	5-12-90	
No. of males and females released to spawn naturally	0	
No. of males, females, jacks transported out	99-101-0	To Wallowa
Mortality of all adult returns	0	

# SPAWNING RECORD

## WALLOWA

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
8/15/90	19,000	4
8/22/90	27,000	10
8/29/90	216,000	56
9/05/90	350,000	90
9/11/90	127,000	34
9/18/90	29,000	7
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TOTAL	768,000	201

Eggs transferred out	675,000	To Oxbow Hatchery
		9/19 to 10/19/90
Shock loss	93,000	
Fry loss	147	

STOCK	SUMMER STEELHEAD	Imnaha R. & Tribs.
	Lot No.	2989

## ADULT RETURNS

### LITTLE SHEEP TRAP

Date of first return	3/17/89
Date of last return	5/20/89
No. of females returning	272
No. of males returning	90
Date of peak returns	4/21/89
No. of males and females released to spawn naturally	41-137
Mortality of all adult returns	19

## SPAWNING RECORD

### LITTLE SHEEP TRAP

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
4/17/89	153,000	24
4/24/89	221,000	35
5/01/89	182,000	33
5/08/89	107,000	17
5/16/89	66,000	14
5/23/89	29,000	6
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TOTALS	758,000	129

## REARING

Eggs transferred in	758,000	From Little Sheep Trap
Eggs transferred out	538,000	4/17/89 to 5/23/89
Shock loss	218,000	To Irrigon Hatchery
Fry loss	2,000	5/19/89 to 6/9/89
Fry loss	20,000	At Wallowa
		At Irrigon
No. smolts shipped in	249,974	From Irrigon
4/04/90 to 4/17/90		42,505 lbs. @ 5.9/lb.
No. smolts liberated	249,564	
Percent mortality to stocking	0.16	
Weight of fry liberated	43,783	
Av. No. / lb. liberated	5.7	
Conversion	1.1	
Total pounds of food fed	1450	
Total gain for		
all fish liberated	1278	
Conversion rate for		
all fish liberated	1.1	

## LITTLE SHEEP PD.

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No. / lb</u>
4/17/90	Sheep Cr. L.	249,564	43,783	5.7
-----				
Total		249,564	43,783	

Total distribution trips	2
Total pounds liberated	43,783

STOCK	SUMMER STEELHEAD	Imnaha R & Tribs.
Lot No.	2990	

## ADULT RETURNS

### LITTLE SHEEP TRAP

Date of first return	3/07/90
Date of last return	5/14/90
No. of females returning	505
No. of males returning	476
Date of peak returns	4/17/90
No. of males and females	
released to spawn naturally	300-316
Mortality of all adult returns	19



## SPAWNING RECORD

### LITTLE SHEEP TRAP

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
4/05/90	85,000	21
4/12/90	164,000	38
4/19/90	200,000	36
4/26/90	136,000	33
5/03/90	114,000	22
5/10/90	77,000	14
5/17/90	61,000	12
5/22/90	12,000	3
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TOTALS	849,000	179

### REARING

Eggs transferred in	850,000	From Little Sheep Trap
Eggs transferred out	536,000	5/04/90 To 5/22/90 To Irrigon
Shock loss	290,000	5/07/90 To 5/23/90 At Wallowa
Fry loss	23,000	At Wallowa

STOCK	SUMMER STEELHEAD	Wallowa R.
	Lot No.	5689

### ADULT RETURNS

#### BIG CANYON TRAP

Date of first return	4/15/89
Date of last return	5/31/89
No. of females returning	199
No. of males returning	148
Date of peak returns	4/15/89
No. of males, females released to spawn naturally	116-139
No. of males, females transported in	0-7
Mortality of all adult returns	4

## WALLOWA TRAP

Date of first return	3/20/89	
Date of last return	5/11/89	
No. of females returning	605	
No. of males returning	615	
Date of peak returns	3/27/89	
No. of males and females released to spawn naturally	115-81	
No. of males, females transported out	0-7	To Big Canyon Trap
Mortality of all adult returns	300	

## SPAWNING RECORD

### WALLOWA

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
4/13/89	589,000	107
4/17/89	355,000	60
4/24/89	287,000	57
4/27/89	229,000	43
5/04/89	76,000	15
4/20/89	650,000	108
5/11/89	29,000	7
5/16/89	10,000	3
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TOTALS	2,225,000	400

### BIG CANYON TRAP

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
4/27/89	62,000	14
5/09/89	76,000	18
5/11/89	49,000	11
5/16/89	24,000	5
5/23/89	29,000	7
5/31	12,000	3
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TOTALS	252,000	58

## REARING

Eggs transferred in	252,000	From Big Canyon Trap
Eggs transferred out	1,528,000	To Irrigon Hatchery 5/27/89 To 5/31/89
Eggs transferred out	250,000	Tucannon Washington 5-12-89
Shock loss	699,000	
Fry loss	26,000	
Percent hatch	72	
No. fingerling shipped in 2/26/90	130,971	From Irrigon 25,235 lbs. @ 5.2/lb
No. fingerling shipped in 3/01/90 to 3/30/90	366,743	From Irrigon 73,504 lbs. @ 5.0/lb
No. fingerling shipped in 3/15/90 to 3/23/90	144,787	From Irrigon 27,229 lbs. @ 5.3/lb
No. fingerling shipped in 4/02/90 to 4/19/90	129,695	From Irrigon 25,000 lbs. @ 5.2/lb
No. smolts liberated	769,290	
Percent mortality to stocking	0.38	
Weight of fry liberated	160,388	
Av. No. / lb. liberated	4.79	
Total pounds of food fed	19,300	
Total gain for all fish liberated	9,420	
Conversion rate for all fish liberated	2.0	

## LIBERATION

<u>Date</u>	<u>Location</u>	<u>Number</u>	<u>Pounds</u>	<u>No. / lb.</u>
<b>Wallowa Hatchery</b>				
4/19/90	Spring Cr.	247,240	51,684	4.8
4/23/90	Spring Cr.	248,635	52,901	4.7
<b>Big Canyon Site</b>				
4/19/90	Deer Cr.	223,379	46,537	4.8
4/30/90	Deer Cr.	50,036	9,266	5.4
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Total		769,290	160,388	
Total distribution trips		13		

STOCK	SUMMER STEELHEAD	Wallowa R.
	Lot No.	5690

#### ADULT RETURNS

Date of first return	3/05/90	
Date of last return	4/27/90	
No. of females returning	481	
No. of males returning	467	
Date of peak returns	3/28/90	
No. of males and females released to spawn naturally	60-0	Wallowa Valley Ponds
No. of males females transported in	0-20	From Big Canyon Trap
No. of males females transported out	10-20	To Big Canyon
Mortality of all adult returns	66	

#### BIG CANYON TRAP

Date of first return	4/02/90	
Date of last return	5/22/90	
No. of females returning	225	
No. of males returning	139	
Date of peak returns	4/02/90	
No. of males, females released to spawn naturally	74-79	
No. of males, females, transported	0-20	To Wallowa
Mortality of all adult returns	7-5	

#### SPAWNING RECORD

#### WALLOWA

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
3/29/90	456,000	68
4/03/90	504,000	84
4/10/90	823,000	168
4/19/90	365,000	68
4/24/90	239,000	55
5/01/90	51,000	10
5/08/90	19,000	4
-----		
TOTALS	2,456,000	457

# **BIG CANYON TRAP**

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>	
4/12/90	150,000	26	
4/17/90	10,000	2	Dumped (excess eggs)
4/24/90	141,000	36	
5/01/90	71,000	14	
5/08/90	120,000	20	
5/15/90	61,000	12	
5/22/90	40,000	9	
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TOTALS	593,000	119	

## **REARING**

Eggs transferred in	583,000	From Big Canyon Trap
Eggs transferred out	1,730,000	To Irrigon
Eggs transferred out	428,000	5/14/90 To 5/25/90
Eggs transferred out	10,000	To Lyons Ferry Hatchery WA
		5/03/90
		To Oregon State University
		6/08/90
Shock loss	518,000	
Fry loss	90,265	
On Hand	263,000	

<b>STOCK</b>	<b>SUMMER STEELHEAD</b>	<b>Upper Grande Ronde</b>
	<b>Lot No.</b>	<b>8090</b>

## **ADULT RETURNS**

Date of first return	3/26/90	
Date of last return	3/28/90	
No. of females returning	0	
No. of males returning	3	
Date of peak returns	3/26/90	
No. of males and females released to spawn naturally	0-0	
No. of males females transported in	0-0	
No. of males females transported out	3-0	To Big Canyon
Mortality of all adult returns	0	

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
No eggs taken killed	0	0

STOCK	SUMMER STEELHEAD	Lookingglass Cr.
	Lot No.	8190

Date of first return	5/25/90
Date of last return	
No. of females returning	2
No. of males returning	3
Date of peak returns	5/25/90
No. of males, females released to spawn naturally	0
No. males, females transported	0
Mortality of adult returns	3-2

<u>Date spawned</u>	<u>Egg take</u>	<u>Females</u>
No eggs taken		

STOCK	RAINBOW TROUT	Cape Cod
	Lot No.	7288

#### REARING

No fingerling shipped in 11/19/89	83,922	From Klamath Hatchery 9,024 lbs. @ 9.3/lb
No. legals liberated	73,018	
Percent mortality to stocking	12.9	
Weight of legals liberated	28,342	
Av. No. / lb... liberated	2.6	
Total pounds of food fed	29,500	
Total gain for all fish liberated	19,318	
Conversion rate for all fish liberated	1.53	

#### LIBERATION

<u>Date</u>	<u>Number</u>	<u>Pounds</u>
4/23/90 To 8/21/90	72,955	28,342
-----		
Total	72,955	28,342
Total distribution trips	42	
Total pounds legals liberated	28,342	

<sup>1</sup> Funding for the production and distribution of these fish is from State Wildlife Fund and General Fund.

STOCK	RAINBOW TROUT	Cape Cod
	Lot No.	7289

# REARING

No. fingerling shipped in	137,543	From Irrigon Hatchery
9/14/90 to 9/14/90		10,180 lbs. @ 13.5/lb
No. fingerling liberated	11,308	
Percent mortality to stocking	1.99	
Weight of fingerling liberated	440	
Av. No. / lb. liberated	25.7	
Conversion	1.6	
Total pounds of food fed	2,160	
Total gain for		
all fish to date	1,328	
Conversion rate for		
all fish liberated	1.6	

# LIBERATION

<u>Date</u>	<u>Number</u>	<u>Pounds</u>
9/28/90	11,308	440
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Total	11,308	404

Total distribution trips 1

<sup>1</sup> Funding for the production and distribution of these fish is from State Wildlife Fund and General Fund.

